DOCUMENT RESUME

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TITLE Fall Department Head Report--Reporting Booklet 2.0 to the Massachusetts Division of Occupational Education (Fiscal Year Ending June 30, 1975) for Metalworking.

INSTITUTION Management and Information System for Occupational Education, Winchester, Mass.

SPONS AGENCY Massachusetts State Dept. of Education, Boston. Div. of Occupational Education.

PUB DATE 30 Jun 75

NOTE 168p.; For related documents, see ED 062 553; ED 068 646-647; ED 072 225; ED 072 228; ED 072 303-304; CE 005 687-727; Instructions for completing the booklet are available in CE 005 701

EDRS PRICE MF-$0.76 HC-$8.24 Plus Postage

DESCRIPTORS Annual Reports; Census Figures; Data Collection; Demonstration Projects; *Educational Objectives; Job Skills; *Management Information Systems; *Metal Working Occupations; Program Design; Program Evaluation; *Records (Forms); State Programs; Trade and Industrial Education; *Vocational Education

IDENTIFIERS Census Data System; *Management Information System Occupational Educa; MISOE; Terminal Performance Objectives; TERMOBS

ABSTRACT

The reporting booklet is required for the Census Data System (CDS) of the Management Information System for Occupational Education (MISOE); it contains the reporting forms which collect data that describe program structure and job-entry skill outcomes expected of program completors in the individual occupational education area of metalworking. Utilization of instructional area is also determined. This booklet contains the terminal performance objectives (TERMOBS) for this program area. They are actually the forms by which the skills of program completors are reported by department heads. CDS, one of two major subsystems of the integrated management information system, was developed to provide occupational education managers with comprehensive data on which to base rational management decisions. Essentially, CDS contains descriptive information systematically structured in a manner which allows it to be used as a basis for sampling evaluative research studies. CDS collects and stores census data for all school systems offering occupational education programs, including all data formerly collected by the Annual Federal Report for Occupational Information, except followup data. (Author/AJ)

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ED115883

Misoc Number 2 Due Date

Name of School System System ID No.

Name of School School ID No.

Name of Preparer of Report Title Telephone No.

Name of Department or Instructional Area

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF EDUCATION

FALL DEPARTMENT HEAD REPORT-REPORTING BOOKLET 2.0

to the

DIVISION OF OCCUPATIONAL EDUCATION
(Fiscal Year Ending June 30, 1975)

for

METALWORKING

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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CE 005 721

Before filing said statement, the superintendent shall submit it to the chairman of the school committee, who shall countersign it on oath, if, after examination, he finds it correct.
(General Laws Relating to Education 1970: Chapter 72, Sec. 2A, Item 4, and Sec. 3, Item 2)

I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.

THE COMMONWEALTH OF MASSACHUSETTS

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I hereby certify that all the statements contained in this report are true to the best of my knowledge and belief, and that this is a true statement, made under the penalties of perjury.

_____ (Date) _____ Superintendent of Schools

_____ (Date) _____ Chairman of School Committee

TABLE OF CONTENTS

		Page
Table 2.I	Enrollment in Final Grade by Student Group and Terminal Objectives (TERMOBs)	2
Table 2.II	Enrollment in Lower Grades by Student Group	6
Table 2.2	Utilization of Student Class Time: Final Grade	10
Table 2.2I	Utilization of Student Class Time: Lower Grades	12
Table 2.3	Utilization of Departmental Instructional Area By Rooms	14
REPORTING TERMINAL PERFORMANCE OBJECTIVES (TERMOBs)		
Table T-I	Instructional Division and Unit Outline	T-2
Table T-IA	Additional Instructional Divisions and Units	T-5
Table T-2	TERMOB Division and Unit Outline	T-6
Table T-2A	Additional TERMOB Divisions and Units	T-7
TERMOBs		
Table T-3	List of Basic Supplies	T-110
Table T-4	Additional TERMOB Performance Statements	T-116
Index of TERMOB Statements		T-118

MTSOE Number

Table 2.1 Enrollment in Final Grade by Student Group & Terminal Objectives (TERMOB)

	1	2	3
1.	Grade		
2.	Student Group Name and Number	101	102
3.	USOE Code(s)		
4.	Level Code		
5.	Type Code		
6.	Session Code		
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes No	Yes No
9.	Workstudy	Yes No	Yes No
10.	Exploratory	Yes No	Yes No
11.	Instructors and Teacher's Aides		
	A. Full Time		
	B. Percentage of Time		
12.	Enrollment	Male / Female	Male / Female

TERMOB Applicability

13. TERMOB Numbers								

6.	Session Code		
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes No	Yes No
9.	Workstudy	Yes No	Yes No
10.	Exploratory	Yes No	Yes No
11.	Instructors and Teacher's Aides		
	A. Full Time		
	B. Percentage of Time		
12.	Enrollment	Male / Female	Male / Female

TERMOB Applicability

13. TERMOB Numbers	

Misoe Number

Table 2.1 (Cont'd) Enrollment In Final Grade by Student Group

	4	5	6
1			
2.	103	104	105
3.			
4.			
5.			
6.			
7.	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Yes No	Yes No	Yes No
9.	Yes No	Yes No	Yes No
10.	Yes No	Yes No	Yes No
11.			
12.	Male Female	Male Female	Male Female

TERMOB Applicability

13.												

7.	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Yes No	Yes No	Yes No
9.	Yes No	Yes No	Yes No
10.	Yes No	Yes No	Yes No
11.			
12.	Male Female	Male Female	Male Female

TERMOB Applicability

13.	

Misoe Number _____

Table 2.1 Enrollment in Final Grade by Student Group & Terminal Objective (TERMOB)

	7	8	9
1.	Grade		
2.	Student Group Name and Number	106	107
3.	USOE Code(s)		
4.	Level Code		
5.	Type Code		
6.	Session Code		
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes No	Yes No
9.	Workstudy	Yes No	Yes No
10.	Exploratory	Yes No	Yes No
11.	Instructors and Teacher's Aides		
	A. Full Time		
	B. Percentage of Time		
12.	Enrollment	Male / Female	Male / Female

TERMOB Applicability

13.	TERMOB Numbers							

6.	Session Code		
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4
8.	Cooperative	Yes No	Yes No
9.	Workstudy	Yes No	Yes No
10.	Exploratory	Yes No	Yes No
11.	Instructors and Teacher's Aides		
	A. Full Time		
	B. Percentage of Time		
12.	Enrollment	Male / Female	Male / Female

TERMOB Applicability

13.	TERMOB Numbers							

Misoe Number

Table 2.1 (Cont'd) Enrollment in Final Grade by Student Group and Terminal Objectives (TERMOBS)

	10	11	12
1.			
2.			
3.	108	109	110
4.			
5.			
6.			
7.	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Yes No	Yes No	Yes No
9.	Yes No	Yes No	Yes No
10.	Yes No	Yes No	Yes No
11.			
12.	Male / Female	Male / Female	Male / Female

TERMOB Applicability

13.												

6.			
7.	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
8.	Yes No	Yes No	Yes No
9.	Yes No	Yes No	Yes No
10.	Yes No	Yes No	Yes No
11.			
12.	Male Female	Male Female	Male Female

TERMOB Applicability

13.												

Table 2.11 Enrollment In Lower Grades by Student Group

	2	3	4	5	6
ame	201	202	203	204	205
(Years)	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
ull Time					
of Time					
	Male Female	Male Female	Male Female	Male Female	Male Female

MISOU Number

Table C.11 Enrollment in Lower Grades by Student Group

	1	2	3	4	
1.	Grade				
2.	Student Group Name and Number	201	202	203	
3.	USOE Code(s)				
4.	LEVEL Code				
5.	Type Code				
6.	Session Code				
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1
8.	Cooperative	Yes No	Yes No	Yes No	Yes
9.	Workstudy	Yes No	Yes No	Yes No	Yes
10.	Exploratory	Yes No	Yes No	Yes No	Yes
11.	Instructors and Teacher's Aides				
	A. Full Time				
	B. Percentage of Time				
12.	Enrollment	Male / Female	Male / Female	Male / Female	Male

Table 2.11 (Cont'd) Enrollment in Lower Grades by Student Group

	8	9	10	11	12
	206	207	208	209	210
	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
me					
me					
	Male Female	Male Female	Male Female	Male Female	Male Female

MI Soe Number

Table 2.11 (Cont'd) Enrollment in Lower Grades by Student Group

		7	8	9	10	11
1.	Grade					
2.	Student Group Name and Number		206	207	208	209
3.	USOE Code(s)					
4.	Level Code					
5.	Type Code					
6.	Session Code					
7.	Program Length (Years)		<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3
8.	Cooperative		Yes No	Yes No	Yes No	Yes No
9.	Workstudy		Yes No	Yes No	Yes No	Yes No
10.	Exploratory		Yes No	Yes No	Yes No	Yes No
11.	Instructors and Teacher's Aides					
	A. Full Time					
	B. Percentage of Time					
12.	Enrollment		Male / Female	Male / Female	Male / Female	Male /

Table 2.11 Enrollment in Lower Grades by Student Group (Cont'd)

	14	15	16	17	18
e	211	212	213	214	215
ears)	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
l Time					
f Time					
	Male Female	Male Female	Male Female	Male Female	Male Female

Misoe Number

Table 2.11 Enrollment in Lower Grades by Student Group (Cont'd)

		13	14	15	16	17
1.	Grade					
2.	Student Group Name and Number	211		212	213	214
3.	USOE Code(s)					
4.	Level Code					
5.	Type Code					
6.	Session Code					
7.	Program Length (Years)	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2	
8.	Cooperative	Yes No	Yes No	Yes No	Yes	
9.	Workstudy	Yes No	Yes No	Yes No	Yes	
10.	Exploratory	Yes No	Yes No	Yes No	Yes	
11.	Instructors and Teacher's Aides					
	A. Full Time					
	B. Percentage of Time					
		Male Female	Male Female	Male Female	Male	
12.	Enrollment					

Table 2.11 Enrollment In Lower Grades by Student Group (Cont'd)

	20	21	22	23	24
me	216	217	218	219	220
Years)	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No	Yes No
ll Time					
of Time					
	Male Female	Male Female	Male Female	Male Female	Male Female

Misoe Number

Table 2.11 Enrollment In Lower Grades by Student Group (Cont'd)

		19	20	21	22	23
1.	Grade					
2.	Student Group Name and Number		216	217	218	219
3.	USOE Code(s)					
4.	Level Code					
5.	Type Code					
6.	Session Code					
7.	Program Length (Years)		<1 1 2 3 4	<1 1 2 3 4	<1 1 2 3 4	<1 1 2
8.	Cooperative		Yes No	Yes No	Yes No	Yes
9.	Workstudy		Yes No	Yes No	Yes No	Yes
10.	Exploratory		Yes No	Yes No	Yes No	Yes
11.	Instructors and Teacher's Aides					
	A. Full Time					
	B. Percentage of Time					
			Male Female	Male Female	Male Female	Male
12.	Enrollment					

Table 2.2 Utilization of Student Class Time: Final Grade

	2	3	4	5	6	7	8	9	10	11
	101	102	103	104	105	106	107	108	109	110
Areas										
sion										
n										

MTSOC Number _____

Table 2.2 Utilization of Student Class Time: Final Grade

	1	2	3	4	5	6	7	8
1.	Student Group Number	101	102	103	104	105	106	107
2.	Grade							
3.	USOE Code(s)							
4.	In Occupational Shop/Lab Area(s)							
5.	In Occupational Related Area(s)							
6.	Total Occupational Time (Linas 4 + 5)							
7.	In Nonoccupational Areas							
8.	Total All Areas (Lines 6 + 7)							
9.	Length of Grade Session (weeks)							
10.	Schedule Variation							
11.	Additional Notes Necessary to Explain Lines 4 through 10							

Table 2.2 Utilization of Student Class Time (Cont'd): Final Grade

	13	14	15	16	17	18	19	20	21	22
	111	112	113	114	115	116	117	118	119	120
reas										
ion										

Misoe Number

Table 2.2 Utilization of Student Class Time (Cont'd): Final Grade

	12	13	14	15	16	17	18	19
1.	Student Group Number	111	112	113	114	115	116	117
2.	Grade							
3.	USOE COde(s)							
4.	In Occupational Shop/Lab Area(s)							
5.	In Occupational Related Area(s)							
6.	Total Occupational Time (Lines 4+ 5)							
7.	In Nonoccupational Areas							
8.	Total All Areas (Lines 6 + 7)							
9.	Length of Grade Session (weeks)							
10.	Schedule Variation							
11.	Additional Notes Necessary to Explain Lines 4 through 10							

Table 2.21 Utilization of Student Class Time: Lower Grade

	2	3	4	5	6	7	8	9	10	11
	201	202	203	204	205	206	207	208	209	210
eas										
on										

Misoe Number

Table 2.21 Utilization of Student Class Time: Lower Grade

	1	2	3	4	5	6	7	8	9
1.	Student Group Number	201	202	203	204	205	206	207	208
2.	Grade								
3.	USOE Code(s)								
4.	In Occupational Shop/Lab Area(s)								
5.	In Occupational Related Area(s)								
6.	Total Occupational Time (Lines 4 + 5)								
7.	In Nonoccupational Areas								
8.	Total All Areas (Lines 6 + 7)								
9.	Length of Grade Session (Weeks)								
10.	Schedule Variation								
11.	Additional Notes Necessary to Explain Lines 4 through 10								

Table 2.21 (Cont'd) Utilization of Student Class Time: Lower Grade

	13	14	15	16	17	18	19	20	21	22
r	211	212	213	214	215	216	217	218	219	220
Areas										
sion										
n										

Misoe Number

Table 2.21 (Cont'd) Utilization of Student Class Time: Lower Grade

	12	13	14	15	16	17	18	19
1.	Student Group Number	211	212	213	214	215	216	217
2.	Grade							
3.	USOE Code(s)							
4.	In Occupational Shop/Lab Area(s)							
5.	In Occupational Related Area(s)							
6.	Total Occupational Time (Lines 4 + 5)							
7.	In Nonoccupational Areas							
8.	Total All Areas (Lines 6 + 7)							
9.	Length of Grade Session (Weeks)							
10.	Schedule Variation							
11.	Additional Notes Necessary to Explain Lines 4 through 10							

Misoe Number _____

Table 2.3 Utilization of Departmental Instructional Area by Rooms

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE A

1	2	3		4		5	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
1A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
2A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
3A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
4A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
5A	Mon.						
	Tues.						

Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
1A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
2A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
3A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
4A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
5A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misco Number

Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Rooms

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE B

6	7	8		9		10	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
1 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
2 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
3 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
4 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
5 B	Mon.						
	Tues.						

Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
1 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
2 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
3 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
4 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
5 B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misco Number

Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Room

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE A

11	12	13		14		15	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
6A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
7A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
8A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
9A	Mon						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
	Mon.						

WEEKLY OR SCHEDULE A

11	12	13		14		15	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
6A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
7A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
8A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
9A	Mon						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
10A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misoe Number

Table 7.3 (Cont'd) Utilization of Departmental Instructional Area by Room

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE B

16	17	18		19		20	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
6B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
7B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
8B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
9B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
10B	Mon.						
	Tues.						

Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
6B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
7B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
8B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
9B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
10B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misoa Number _____

Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Room

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE A

21	22	23		24		25	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
11A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
12A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
13A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
14A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
15A	Mon.						
	Tues.						

21	22	23		24		25	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
11A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
12A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
13A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
14A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
15A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat						
TOTALS							

Misoo Number

Table 2.3 (Cont'd) Utilization of Departmental Instructional Area by Room

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE B

26	27	28		29		30	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs.Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
11B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
12B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
13B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
14B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
15B	Mon.						
	Tues.						

26	27	28		29		30	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs.Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
11B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
12B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
13B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
14B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
15B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misoe Number _____

Table 2.3 Utilization of Departmental Instructional Area By Room

Check Applicable Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE A

31	32	33		34		35	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 P.M.-11:00 p.m.	
		No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
16A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
17A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
18A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
19A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						

WEEKLY OR SCHEDULE A

31	32	33		34		35	
Room No. or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 P.M.-11:00 p.m.	
		No. of Hrs Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
16A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
17A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
18A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
19A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
20A	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

Misoe Number

Table 2.3 (Conr d) Utilization of Departmental Instructional Area by Room

Check Applicaboe Program Schedule

1. a. [ ] Weekly
   b. [ ] Alternating
   c. [ ] Variable

2. a. [ ] Semester Schedule Change
   b. [ ] No Semester Schedule Change

WEEKLY OR SCHEDULE B

36	37	38		39		40	
Room No.or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs.Used	No. of Stud. Hrs	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
16B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
17B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
18B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
19B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
20B	Mon.						
	Tues.						

36	37	38		39		40	
Room No.or Name	Day of the Week	Morning 7:00 a.m.-12:00N		Afternoon 12:00N-6:00 p.m.		Evening 6:00 p.m.-11:00 p.m.	
		No. of Hrs.Used	No. of Stud. Hrs	No. of Hrs. Used	No. of Stud. Hrs.	No. of Hrs. Used	No. of Stud. Hrs.
16B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
17B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
18B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
19B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							
20B	Mon.						
	Tues.						
	Wed.						
	Thurs.						
	Fri.						
LS C	Sat.						
TOTALS							

REPORTING TERMINAL PERFORMANCE OBJECTIVES (TERMOBS)

TABLE T-1 - INSTRUCTIONAL DIVISION AND UNIT OUTILNE

METALWORKING PROGRAM

DOES THIS OUTLINE CONTAIN ALL OF THE INSTRUCTIONAL CONTENT OF YOUR PROGRAM: YES____ NO____

CODE	DIVISION	CODE	UNIT
01	DRAFTING	01	FREE-HAND DRAWING
		02	RADIAL LINE DEVELOPMENT
		03	PARALLEL LINE DEVELOPMENT
		04	TRIANGULATION
		05	MENSURATION
		06	BLUEPRINT READING
		07	WELDING SYMBOLS
02	SHOP MATH	01	FRACTIONS
		02	DECIMALS
		03	CIRCUMFERENCES
		04	ANGULAR MEASUREMENTS
		05	AREA MEASUREMENTS
		06	VOLUMES AND CAPACITIES
		07	COSTS
03	METALLURGY	01	PROPERTIES
		02	STRUCTURE
		03	CHEMICAL ANALYSIS
		04	TESTING
04	POWER SOURCES	01	A. C. WELDING
		02	D. C. WELDING
		03	OXY-ACETYLENE FLAME
05	WELDING	01	MANUAL
		02	SEMI-AUTOMATIC
		03	AUTOMATIC
		04	MECHANICAL
		05	SAFETY
06	FORMING AND BENDING	01	HAND FORGING
		02	POWER BENDING
		03	HOSSFELD BENDING
07	POWER MACHINES	01	GRINDERS
		02	DRILL PRESS
		03	IRON WORKER
		04	HORIZONTAL BANDSAW
		05	VERTICAL BANDSAW
		06	POWER SHEAR
		07	POWER BRAKE
		08	NIBBLER
		09	POWER ROLLS
		10	PITTSBURG
		11	GROOVE
		12	SHOP MASTER
		13	SLITTER
		14	LOCK FORMER
		15	HAND TOOLS
		16	SAFETY

		06	BLUEPRINT READING
		07	WELDING SYMBOLS
02	SHOP MATH	01	FRACTIONS
		02	DECIMALS
		03	CIRCUMFERENCES
		04	ANGULAR MEASUREMENTS
		05	AREA MEASUREMENTS
		06	VOLUMES AND CAPACITIES
		07	COSTS
03	METALLURGY	01	PROPERTIES
		02	STRUCTURE
		03	CHEMICAL ANALYSIS
		04	TESTING
04	POWER SOURCES	01	A. C. WELDING
		02	D. C. WELDING
		03	OXY-ACETYLENE FLAME
05	WELDING	01	MANUAL
		02	SEMI-AUTOMATIC
		03	AUTOMATIC
		04	MECHANICAL
		05	SAFETY
06	FORMING AND BENDING	01	HAND FORGING
		02	POWER BENDING
		03	HOSSFELD BENDING
07	POWER MACHINES	01	GRINDERS
		02	DRILL PRESS
		03	IRON WORKER
		04	HORIZONTAL BANDSAW
		05	VERTICAL BANDSAW
		06	POWER SHEAR
		07	POWER BRAKE
		08	NIBBLER
		09	POWER ROLLS
		10	PITTSBURG
		11	GROOVE
		12	SHOP MASTER
		13	SLITTER
		14	LOCK FORMER
		15	HAND TOOLS
		16	SAFETY
08	MANUAL MACHINES	01	BEVEL SHEAR
		02	FOOT SHEAR
		03	RING AND CIRCLE SHEAR
		04	BAR FOLDER
		05	HAND PUNCH
		06	NOTCHER
		07	BENDER
		08	ROLLER
		09	ROD CUTTER

TABLE T-1 (CONT'D) - INSTRUCTIONAL DIVISION AND UNIT OUTLINE

METALWORKING PROGRAM

CODE	DIVISION	CODE	UNIT
08	MANUAL MACHINES (CONT'D)	10	PRESS BRAKE
		11	CORNICE BRAKE
		12	BOX AND PAN BRAKE
		13	GROOVER
		14	ROTARY MACHINES
		15	SAFETY
09	BENCHWORK	01	PLANNING
		02	LAYOUT
		03	CUTTING
		04	FORMING
		05	RAISING
		06	DRILLING
		07	SEAMING
		08	FITTING
		09	RIVETING
		10	SOLDERING
		11	WIRE EDGING
		12	FINISHING
		13	JIGGING
		14	SAFETY
10	STEEL SHAPES	01	STRUCTURAL
		02	PLATE
		03	SHEET
		04	BAR
		05	EXTRUSIONS
11	FLAME CUTTING	01	HAND
		02	AUTOMATIC
		03	STRAIGHT
		04	SHAPE
		05	SAFETY
12	FABRICATION	01	BOXES
		02	PANS
		03	CABINETS
		04	DRAWERS
		05	TABLE TOPS
		06	CYLINDERS
		07	LOCKERS
		08	HOODS
		09	BUTTERS
		10	FUNNELS
		11	DOORS
		12	SHELVES
		13	LANTERNS
13	FINISHING	01	CHIPPING
		02	GRINDING
		03	BRUSHING
		04	SANDING
		05	GRAINING

09	BENCHWORK	01	PLANNING
		02	LAYOUT
		03	CUTTING
		04	FORMING
		05	RAISING
		06	DRILLING
		07	SEAMING
		08	FITTING
		09	RIVETING
		10	SOLDERING
		11	WIRE EDGING
		12	FINISHING
		13	JIGGING
		14	SAFETY
10	STEEL SHAPES	01	STRUCTURAL
		02	PLATE
		03	SHEET
		04	BAR
		05	EXTRUSIONS
11	FLAME CUTTING	01	HAND
		02	AUTOMATIC
		03	STRAIGHT
		04	SHAPE
		05	SAFETY
12	FABRICATION	01	BOXES
		02	PANS
		03	CABINETS
		04	DRAWERS
		05	TABLE TOPS
		06	CYLINDERS
		07	LOCKERS
		08	HOODS
		09	BUTTERS
		10	FUNNELS
		11	DOORS
		12	SHELVES
		13	LANTERNS
13	FINISHING	01	CHIPPING
		02	GRINDING
		03	BRUSHING
		04	SANDING
		05	GRAINING
		06	POLISHING
		07	PAINTING
		08	ANTIQUING
		09	SAFETY
14	HEAT TREATING	01	OVEN
		02	TORCH
		03	ELECTRICAL

TABLE T-1 (CONT'D) - INSTRUCTIONAL DIVISION AND UNIT OUTLINE

METALWORKING PROGRAM

CODE	DIVISION	CODE	UNIT
15	INSTALLATION	01	BRACKETS
		02	HOODS
		03	KITCHEN EXHAUSTS
		04	BATHROOM EXHAUSTS
		05	HEATING SYSTEMS
		06	AIR CONDITIONING SYSTEMS
		07	FLUE PIPES
		08	LOUVRES
		09	DRIER VENTS
		10	PARTITIONS
		11	FIRE DOORS
		12	CABINETS
		13	LOCKERS
		14	RAILINGS
16	METAL SCULPTURES	01	INSPIRING
		02	CREATING
		03	BUILDING
17	PLASTICS	01	CUTTING
		02	HEATING
		03	FORMING
		04	FABRICATING
		05	WELDING
		06	BOLTING
		07	RIVETING
		08	CEMENTING

TABLE T-2 - TERMOB DIVISION AND UNIT OUTLINE

METALWORKING PROGRAM

DOES THIS OUTLINE CONTAIN ALL TOPICS IN WHICH GRADUATES ACQUIRE JOB-ENTRY SKILLS: YES____ NO____

CODE	DIVISION	CODE	UNIT
01	PATTERN DRAFTING	01	PARALLEL LINE DEVELOPMENT
		02	RADIAL LINE DEVELOPMENT
		03	TRIANGULATION
02	WELDING AND CUTTING	01	ELECTRIC ARC
		02	TIG
		03	MIG
		04	OXYGEN ACETYLENE
		05	BRAZING
		06	RESISTANCE WELDING
03	HEAT TREATING	01	ANNEAL
		02	DEEP HARDENING
		03	CASE HARDENING
		04	TEMPERING
		05	HARDNESS TESTING
		06	STRESS RELIEVING
		07	NORMALIZING
04	SHEETMETAL FABRICATION	01	INDUSTRIAL EQUIPMENT
		02	HOUSEHOLD EQUIPMENT
		03	PRECISION SHEETMETAL
		04	HEATING AND VENTILATION
05	"ART" METALWORK		

TERMINAL PERFORMANCE OBJECTIVES (TERMOBS)

and

REPORTING FORMS

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-001

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF ROUND TEE
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT PATTERNS FOR ROUND TEE BY PARALLEL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW ALL NECESSARY VIEWS
( ) 2.03 LOCATE MEASURING LINES ON NECESSARY VIEWS
( ) 2.04 TRANSFER MEASURING LINES FROM NECESSARY VIEWS TO LOCATE INTERSECTION AND PATTERN OUTLINE
( ) 2.05 CONNECT POINTS LOCATED ON MEASURING LINES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERNS FOR ROUND TEE ARE LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$, MEASURING LINES ARE SPACED IN A MANNER TO FACILITATE LOCATION ON THE PATTERN
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$, CURVE IS FAIRED IN SMOOTHLY

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-001

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-002

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF ROUND PIPE WITH MITER AT ONE END

( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 LAY OUT A PATTERN FOR A ROUND PIPE WITH MITER AT ONE END BY PARALLEL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW ALL NECESSARY VIEWS

( ) 2.03 LOCATE MEASURING LINES ON NECESSARY VIEWS

( ) 2.04 TRANSFER MEASURING LINES FROM NECESSARY VIEWS TO LOCATE INTERSECTIONS AND PATTERN OUTLINE

( ) 2.05 CONNECT POINTS LOCATED ON MEASURING LINES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 PATTERN FOR ROUND PIPE IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$

( ) 3.03 TO $\pm 1/32$, MEASURING LINES ARE SPACED IN A MANNER TO FACILITATE LOCATION ON THE PATTERN

( ) 3.04 TO $\pm 1/32$

( ) 3.05 TO $\pm 1/32$

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-002

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-003

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF STRAIGHT RECTANGULAR DUCT

( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 LAY OUT A PATTERN FOR A STRAIGHT RECTANGULAR DUCT BY PARALLEL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW ALL NECESSARY VIEWS

( ) 2.03 LOCATE MEASURING LINES ON NECESSARY VIEWS

( ) 2.04 TRANSFER MEASURING LINES FROM NECESSARY VIEWS TO LOCATE INTERSECTIONS AND PATTERN OUTLINE

( ) 2.05 CONNECT POINTS LOCATED ON MEASURING LINES

( ) 2.06 MARK FOR FORMING ALL BEND LINES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 PATTERN FOR STRAIGHT RECTANGULAR DUCT IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 45 MINUTES WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$

( ) 3.03 TO $\pm 1/32$, MEASURING LINES ALL SPACED IN A MANNER TO FACILITATE LOCATION ON THE PATTERN

( ) 3.04 TO $\pm 1/32$

( ) 3.05 TO $\pm 1/32$

( ) 3.06 TO $\pm 1/32$

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-003

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-004

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF A RECTANGULAR DUCT WITH A DOUBLE ANGLE CUT

( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

( ) 2.01 LAY OUT A PATTERN FOR A RECTANGULAR DUCT WITH A DOUBLE ANGLE BY PARALLEL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW ALL NECESSARY VIEWS

( ) 2.03 LOCATE MEASURING LINES ON NECESSARY VIEWS

( ) 2.04 TRANSFER MEASURING LINES FROM NECESSARY VIEWS TO LOCATE INTERSECTIONS AND PATTERN OUTLINE

( ) 2.05 CONNECT POINTS LOCATED ON MEASURING LINES

( ) 2.06 MARK FOR FORMING ALL BEND LINES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 PATTERN FOR RECTANGULAR DUCT IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$

( ) 3.03 TO $\pm 1/32$, MEASURING LINES ARE SPACED IN A MANNER TO FACILITATE LOCATION ON THE PATTERN

( ) 3.04 TO $\pm 1/32$

( ) 3.05 TO $\pm 1/32$

( ) 3.06 TO $\pm 1/32$

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-004

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-005

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF 3-PIECE ROUND ELBOW
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT PATTERNS FOR 3-PIECE ELBOW BY PARALLEL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW ALL NECESSARY VIEWS
( ) 2.03 LOCATE MEASURING LINES ON NECESSARY VIEWS
( ) 2.04 TRANSFER MEASURING LINES FROM NECESSARY VIEWS TO LOCATE INTERSECTIONS AND PATTERN OUTLINE
( ) 2.05 CONNECT POINTS LOCATED ON MEASURING LINES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERNS FOR 3-PIECE ELBOW IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$, MEASURING LINES ARE SPACED IN A MANNER TO FACILITATE LOCATION ON THE PATTERN
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 01 PARALLEL LINE DEVELOPMENT

TERMOB NO. 17-005

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 02 RADIAL LINE DEVELOPMENT

TERMOB NO. 17-006

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF CENTERED ROUND TAPER
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT A PATTERN FOR CENTERED ROUND TAPER BY THE RADIAL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW THE SIDE VIEW OF THE TAPER
( ) 2.03 EXTEND SIDE LINES UNTIL THEY MEET TO FORM AN APEX
( ) 2.04 USING THE APEX AS THE CENTER PROJECT ARCS FROM THE TOP AND BOTTOM CORNERS OF THE TAPER
( ) 2.05 USING DIVIDERS STEPOFF STRETCHOUT ON THE BOTTOM CURVE
( ) 2.06 DRAW LINES FROM THE APEX TO THE ENDS OF THE STRETCHOUT ON THE BOTTOM ARC

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERN FOR CENTERED ROUND TAPER IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$1/32
( ) 3.03 TO $\pm$1/32
( ) 3.04 TO $\pm$1/32
( ) 3.05 TO $\pm$1/32
( ) 3.06 TO $\pm$1/32

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 01 PATTERN-MAKING

UNIT 02 RADIAL LINE DEVELOPMENT

TERMOB NO. 17-006

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 02 RADIAL LINE DEVELOPMENT

TERMOB NO. 17-007

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF ROUND RIGHT CONE
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT A PATTERN FOR ROUND RIGHT CONE BY RADIAL LINE DEVELOPMENT METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 DRAW THE ELEVATION VIEW
( ) 2.03 DRAW THE PLAN VIEW
( ) 2.04 DRAW STRETCHOUT ARC
( ) 2.05 IDENTIFY TRUE LENGTHS OF THE ELEMENTS ON STRETCHOUT

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERN FOR ROUND CONE IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 ALL TRUE LENGTHS IDENTIFIED AND PROPERLY RECORDED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 02 RADIAL LINE DEVELOPMENT

TERMOB NO. 17-007

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 03 TRIANGULATION

TERMOB NO. 17-008

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF SQUARE TO ROUND FITTING
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT A PATTERN FOR A SQUARE TO ROUND FITTING BY THE TRIANGULATION METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CONSTRUCT PLAN AND ELEVATION VIEW
( ) 2.03 IDENTIFY TRUE LENGTHS
( ) 2.04 DRAW TRUE LENGTH TRIANGLE
( ) 2.05 ESTABLISH TRUE GIRTH SPACE
( ) 2.06 LOCATE NEW POINTS BY MEASURING FROM TWO KNOWN POINTS
( ) 2.07 CONNECT NEW POINTS

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERN FOR A SQUARE TO ROUND FITTING IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 ALL TRUE LENGTHS ALL IDENTIFIED
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 TO $\pm 1/32$
( ) 3.07 TO $\pm 1/32$, CURVE IS FAIR

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

USOE CODE NO(S) _____

UNIT 03 TRIANGULATION

TERMOB NO. 17-008

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 01 PATTERN-MAKING

UNIT 03 TRIANGULATION

TERMOB NO. 17-009

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF ROUND TAPER THAT IS OFF CENTER
( ) 1.02 DRAFTING TOOLS (TABLE T-3A)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 LAY OUT A ROUND TAPER THAT IS OFF CENTER BY THE TRIANGULATION METHOD EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CONSTRUCT PLAN AND ELEVATION VIEW
( ) 2.03 IDENTIFY TRUE LENGTHS
( ) 2.04 DRAW TRUE LENGTH TRIANGLE
( ) 2.05 ESTABLISH GIRTH SPACES
( ) 2.06 LOCATE NEW POINTS BY MEASURING FROM TWO KNOWN POINTS
( ) 2.07 CONNECT NEW POINTS

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 PATTERN FOR ROUND TAPER IS LAID OUT AS SPECIFIED IN DRAWING TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 ALL TRUE LENGTHS ARE IDENTIFIED
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 TO $\pm 1/32$
( ) 3.07 TO $\pm 1/32$

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 01 PATTERN-MAKING

UNIT 03 TRIANGULATION

TERMOB NO. 17-009

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-010

1.00 CONDITION

( ) 1.01 BLUEPRINT OF BUTT JOINT
( ) 1.02 BLUEPRINT OF LAP JOINT
( ) 1.03 BLUEPRINT OF TEE JOINT
( ) 1.04 BLUEPRINT OF CORNER JOINT
( ) 1.05 BLUEPRINT OF EDGE JOINT
( ) 1.06 ELECTRIC ARC WELDING EQUIPMENT
( ) 1.07 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.08 TABLE OF CURRENT SETTINGS
( ) 1.09 TABLE FOR SELECTING THE ELECTRODE
( ) 1.10 MILD STEEL STOCK
( ) 1.11 HIGH CARBON STEEL
( ) 1.12 STAINLESS STEEL STOCK
( ) 1.13 LOW ALLOY STEEL

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 WELD A JOINT OR SEAM AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 SET CURRENT
( ) 2.04 SELECT THE ELECTRODE AND CLAMP IT IN THE HOLDER
( ) 2.05 INITIATE WELD

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 JOINT OR SEAM IS WELDED WITH SMOOTHNESS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN 1/2 HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL ELECTRICAL CONNECTIONS ARE TIGHT AND CLEAN
( ) 3.03 CURRENT IS SET AS SPECIFIED IN TABLE
( ) 3.04 PROPER ELECTRODE AS SPECIFIED IN TABLE IS SELECTED
( ) 3.05 NO MARRING WITH SCRATCH, NO CATCHING WITH TAP

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-010

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-011

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 ELECTRIC ARC WELDING EQUIPMENT
( ) 1.03 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.04 TABLE OF CURRENT SETTINGS
( ) 1.05 WELDING RODS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 REBUILD WORN AREA OF CAST IRON PIECE FOR RE-MACHINING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 SELECT ELECTRODE
( ) 2.04 SET CURRENT
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WORN CAST IRON PIECE IS REBUILT TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS ARE TIGHT AND CLEAN
( ) 3.03 CORRECT ELECTRODE SELECTED
( ) 3.04 AS SPECIFIED IN TABLE
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-011

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-012

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 ELECTRIC ARC WELDING EQUIPMENT
( ) 1.03 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.04 TABLE OF CURRENT SETTINGS
( ) 1.05 NICKEL WELDING RODS
( ) 1.06 BENCH GRINDER

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREATE RESISTANCE TO ABRASION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 SELECT ELECTRODE
( ) 2.04 SET CURRENT
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS ARE TIGHT AND CLEAN
( ) 3.03 CORRECT ELECTRODE SELECTED
( ) 3.04 AS SPECIFIED IN TABLE
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-012

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-013

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 ELECTRIC ARC WELDING EQUIPMENT
( ) 1.03 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.04 TABLE OF CURRENT SETTINGS
( ) 1.05 STAINLESS STEEL WELDING RODS
( ) 1.06 BENCH GRINDER

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREATE RESISTANCE TO CORROSION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 SELECT ELECTRODE
( ) 2.04 SET CURRENT
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS ARE TIGHT AND CLEAN
( ) 3.03 CORRECT ELECTRODE SELECTED
( ) 3.04 AS SPECIFIED IN TABLE
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 ELECTRIC ARC

TERMOB NO. 17-013

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 02 TIG

TERMOB NO. 17-014

1.00 CONDITION

( ) 1.01 BLUEPRINT OF BUTT JOINT
( ) 1.02 BLUEPRINT OF LAP JOINT
( ) 1.03 BLUEPRINT OF TEE JOINT
( ) 1.04 BLUEPRINT OF CORNER JOINT
( ) 1.05 BLUEPRINT OF EDGE JOINT
( ) 1.06 TIG WELDING EQUIPMENT
( ) 1.07 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.08 TABLE OF CURRENT SETTINGS
( ) 1.09 TABLE FOR SELECTING THE ELECTRODES
( ) 1.10 1/8" MAGNESIUM
( ) 1.11 3/16" MAGNESIUM
( ) 1.12 1/4" ALUMINUM
( ) 1.13 STAINLESS STEEL (UP TO .050")
( ) 1.14 STAINLESS STEEL (.050" AND UP)
( ) 1.15 BRASS ALLOYS
( ) 1.16 LOW CARBON STEEL (.015" TO .030")
( ) 1.17 CAST IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 WELD A SEAM OR JOINT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CIRCUIT CONNECTIONS
( ) 2.03 CUT ELECTRODE
( ) 2.04 ADJUST THE ELECTRODE
( ) 2.05 SET AMPERAGE
( ) 2.06 SET INERT GAS
( ) 2.07 POSITION FILLER ROD
( ) 2.08 WELD

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 SEAM OR JOINT IS WELDED WITH SMOOTHNESS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS TIGHT
( ) 3.03 PROPER DIAMETER SELECTED AND CUT TO APPROPRIATE LENGTH

( ) 1.04 BLUEPRINT OF CORNER JOINT
( ) 1.05 BLUEPRINT OF EDGE JOINT
( ) 1.06 TIG WELDING EQUIPMENT
( ) 1.07 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.08 TABLE OF CURRENT SETTINGS
( ) 1.09 TABLE FOR SELECTING THE ELECTRODES
( ) 1.10 1/8" MAGNESIUM
( ) 1.11 3/16" MAGNESIUM
( ) 1.12 1/4" ALUMINUM
( ) 1.13 STAINLESS STEEL (UP TO .050")
( ) 1.14 STAINLESS STEEL (.050" AND UP)
( ) 1.15 BRASS ALLOYS
( ) 1.16 LOW CARBON STEEL (.015" TO .030")
( ) 1.17 CAST IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 WELD A SEAM OR JOINT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CIRCUIT CONNECTIONS
( ) 2.03 CUT ELECTRODE
( ) 2.04 ADJUST THE ELECTRODE
( ) 2.05 SET AMPERAGE
( ) 2.06 SET INERT GAS
( ) 2.07 POSITION FILLER ROD
( ) 2.08 WELD

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 SEAM OR JOINT IS WELDED WITH SMOOTHNESS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS TIGHT
( ) 3.03 PROPER DIAMETER SELECTED AND CUT TO APPROPRIATE LENGTH
( ) 3.04 ELECTRODE EXTENDS 1/8" TO 3/16" BEYOND END OF GAS CUP
( ) 3.05 CORRECT AMPERAGE
( ) 3.06 CORRECT FLOW
( ) 3.07 AT PROPER ANGLE
( ) 3.08 SEAM OR JOINT SMOOTH WITH METAL EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 02 TIG

TERMOB NO. 17-014

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 02 TIG

TERMOB NO. 17-015

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 TIG WELDING EQUIPMENT
( ) 1.03 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.04 TABLE OF CURRENT SETTINGS
( ) 1.05 NICKEL WELDING RODS
( ) 1.06 BENCH GRINDER

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREAT RESISTANCE TO ABRASION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 CUT ELECTRODE
( ) 2.04 ADJUST ELECTRODE
( ) 2.05 SET AMPERAGE
( ) 2.06 SET INERT GAS
( ) 2.07 POSITION FILLER ROD
( ) 2.08 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS TIGHT AND CLEAN
( ) 3.03 TO PROPER LENGTH
( ) 3.04 ELECTRODE EXTENDS 1/8" TO 3/16" BEYOND END OF GAS CUP
( ) 3.05 CORRECT AMPERAGE
( ) 3.06 CORRECT FLOW
( ) 3.07 AT PROPER ANGLE
( ) 3.08 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 02 TIG

TERMOB NO. 17-015

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 02 TIG

TERMOB NO. 17-016

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 TIG WELDING EQUIPMENT
( ) 1.03 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.04 TABLE OF CURRENT SETTINGS
( ) 1.05 STAINLESS STEEL WELDING RODS
( ) 1.06 BENCH GRINDER

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREATE RESISTANCE TO CORROSION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL ELECTRICAL CONNECTIONS
( ) 2.03 CUT ELECTRODE
( ) 2.04 ADJUST ELECTRODE
( ) 2.05 SET AMPERAGE
( ) 2.06 SET INERT GAS
( ) 2.07 POSITION FILLER ROD
( ) 2.08 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 ALL CONNECTIONS TIGHT AND CLEAN
( ) 3.03 TO PROPER LENGTH
( ) 3.04 ELECTRODE EXTENDS 1/8" TO 3/16" BEYOND END OF GAS CUP
( ) 3.05 CORRECT AMPERAGE
( ) 3.06 CORRECT FLOW
( ) 3.07 AT PROPER ANGLE
( ) 3.08 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 02 TIG

TERMOB NO. 17-016

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 03 MIG

TERMOB NO. 17-017

1.00 CONDITION

( ) 1.01 BLUEPRINT OF BUTT JOINT
( ) 1.02 BLUEPRINT OF LAP JOINT
( ) 1.03 BLUEPRINT OF TEE JOINT
( ) 1.04 BLUEPRINT OF CORNER JOINT
( ) 1.05 BLUEPRINT OF EDGE JOINT
( ) 1.06 MIG WELDING EQUIPMENT:
CONSTANT VOLTAGE (POTENTIAL) POWER SUPPLY
D. C. GENERATOR POWER SUPPLY
D. C. R. P. POWER SUPPLY
WIRE FEEDING MECHANISM
WELDING GUN
ELECTRODE WIRE
SHIELDED GAS:
ARGON
HELIUM
OXYGEN
CARBON DIOXIDE
( ) 1.07 TABLES OF FILLER WIRE AND FEED
( ) 1.08 TABLES OF CURRENT SETTINGS
( ) 1.09 TABLE OF GAS AND FLOWS
( ) 1.10 1/16" STAINLESS STEEL
( ) 1.11 1/4" CARBON STEEL
( ) 1.12 1/2" ALUMINUM
( ) 1.13 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 WELD JOINT OR SEAM AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CHECK ALL HOSE AND CABLE CONNECTIONS
( ) 2.03 SELECT NOZZLE
( ) 2.04 THREAD WIRE THROUGH GUN
( ) 2.05 CLEAN OR INSPECT APERTURES OF CONTACT TUBE AND NOZZLE
( ) 2.06 POSITION WORK
( ) 2.07 SET WIRE SPEED AND FEED
( ) 2.08 SELECT SHIELDED GAS
( ) 2.09 TURN ON SHIELDED GAS AND WATER COOLANT
( ) 2.10 WELD

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 03 MIG

TERMOB NO. 17-017

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 03 MIG

TERMOB NO. 17-017 (CONT'D)

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

( ) 3.01 JOINT OR SEAM WELDED WITH SMOOTHNESS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CONNECTIONS TIGHT AND PROPERLY INSULATED
( ) 3.03 CORRECT NOZZLE SELECTED
( ) 3.04 PROPERLY THREADED AND EXTENDING CORRECT DISTANCE
( ) 3.05 APERTURES CLEAN
( ) 3.06 PROPERLY POSITIONED IN WELDING VISE
( ) 3.07 CORRECT SPEED AND FEED
( ) 3.08 CORRECT GAS
( ) 3.09 ADJUSTED FOR CORRECT OUTPUT
( ) 3.10 SEAM OR JOINT SMOOTH WITH METAL EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 03 MIG

TERMOB NO. 17-017 (CONT'D)

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-018

1.00 CONDITION

( ) 1.01 BLUEPRINT OF BUTT JOINT
( ) 1.02 BLUEPRINT OF LAP JOINT
( ) 1.03 BLUEPRINT OF TEE JOINT
( ) 1.04 BLUEPRINT OF CORNER JOINT
( ) 1.05 BLUEPRINT OF EDGE JOINT
( ) 1.06 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.07 WELDING ROD
( ) 1.08 1/8" ROLLED STEEL STOCK
( ) 1.09 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 WELD A JOINT OR SEAM AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 TACK WORK
( ) 2.05 WELD

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 JOINT OR SEAM IS WELDED WITH SMOOTHNESS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE-HALF HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.05 SEAM OR JOINT SMOOTH WITH METAL EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-018

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-019

1.00 CONDITION

( ) 1.01 BLUEPRINT OF STOCK TO BE CUT
( ) 1.02 1/8" ROLLED STEEL STOCK
( ) 1.03 1/2" ROLLED STEEL STOCK
( ) 1.04 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.05 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FLAME CUT STOCK AS PRESCRIBED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGE
( ) 2.03 ADJUST TORCH
( ) 2.04 PREHEAT METAL
( ) 2.05 CUT ALONG LINE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 STOCK IS CUT AS SPECIFIED IN BLUEPRINT TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE-HALF HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 AT CUTTING LINE STARTING POINT
( ) 3.05 ADHERING TO LINE USING HIGH PRESSURE OXYGEN

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-019

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 OXYGEN-ACETYLENE

TERMOB NO. 17-020

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.03 BENCH GRINDER
( ) 1.04 NICKEL WELDING RODS
( ) 1.05 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREATE RESISTANCE TO ABRASION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 SELECT WELDING ROD
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 OXYGEN-ACETYLENE

TERMOB NO. 17-020

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 01 OXYGEN-ACETYLENE

TERMOB NO. 17-021

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.03 BENCH GRINDER
( ) 1.04 STAINLESS STEEL WELDING RODS
( ) 1.05 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARD RESURFACE CAST IRON PIECE TO CREATE RESISTANCE TO CORROSION EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 SELECT WELDING ROD
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CAST IRON PIECE IS HARD RESURFACED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 01 OXYGEN-ACETYLENE

TERMOB NO. 17-021

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-022

1.00 CONDITION

( ) 1.01 WORN CAST IRON PIECE
( ) 1.02 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.03 BENCH GRINDER
( ) 1.04 WELDING RODS
( ) 1.05 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 REBUILD WORN CAST IRON PIECE FOR RE-MACHINING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 SELECT WELDING ROD
( ) 2.05 BUILD UP WORN AREA

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WORN CAST IRON PIECE IS REBUILT TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 METAL IS EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-022

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-023

1.00 CONDITION

( ) 1.01 FRACTURED CAST IRON PIECE
( ) 1.02 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.03 WELDING RODS
( ) 1.04 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 REPAIR BROKEN CASTING BY OXY-ACETYLENE WELDING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 SELECT WELDING ROD
( ) 2.05 TACK WORK
( ) 2.06 WELD FRACTURE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 BROKEN CASTING IS REPAIRED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.06 SEAM IS SMOOTH WITH METAL EVENLY DISTRIBUTED

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 04 OXYGEN-ACETYLENE

TERMOB NO. 17-023

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 05 BRAZING

TERMOB NO. 17-024

1.00 CONDITION

( ) 1.01 BLUEPRINT OF SEAM TO BE BRAZED
( ) 1.02 LOW CARBON STEEL
( ) 1.03 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.04 BRAZING RODS
( ) 1.05 TABLE OF BRAZING RODS AND METALS
( ) 1.06 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 BRAZE SEAM AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 ADJUST TANK GAUGES
( ) 2.03 ADJUST TORCH
( ) 2.04 SELECT BRAZING ROD
( ) 2.05 APPLY FLUX
( ) 2.06 BRAZE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 SEAM IS BRAZED WITH NO IMPERFECTIONS AND PROPER PENETRATION TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 CORRECTLY ADJUSTED
( ) 3.03 FOR NEUTRAL FLAME
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 CORRECTLY APPLIED
( ) 3.06 ROD PREHEATED, BRAZE IS SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 05 BRAZING

TERMOB NO. 17-024

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 05 BRAZING

TERMOB NO. 17-025

1.00 CONDITION

( ) 1.01 FRACTURED CAST IRON PIECE
( ) 1.02 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.03 BENCH GRINDER
( ) 1.04 SOLVENTS
( ) 1.05 BRAZING RODS
( ) 1.06 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.07 FLUX

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 REPAIR FRACTURED CASTING BY BRAZING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CLEAN CASTING
( ) 2.03 GRIND CASTING
( ) 2.04 SELECT BRAZING ROD
( ) 2.05 ADJUST TANK GAUGES
( ) 2.06 ADJUST TORCH
( ) 2.07 PREHEAT
( ) 2.08 APPLY FLUX
( ) 2.09 BRAZE FRACTURE
( ) 2.10 POST HEAT

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 FRACTURED CASTING IS BRAZED WITH NO IMPERFECTIONS TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 FREE FROM DIRT AND GREASE
( ) 3.03 PIECE ALIGNS PROPERLY
( ) 3.04 CORRECT ROD SELECTED
( ) 3.05 CORRECTLY ADJUSTED
( ) 3.06 FOR NEUTRAL FLAME
( ) 3.07 SUFFICIENTLY FOR BRAZING
( ) 3.08 EVENLY
( ) 3.09 BRAZE IS SMOOTH
( ) 3.10 SLOW COOLED, BRAZE DOES NOT CRACK

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 02 WELDING & CUTTING

UNIT 05 BRAZING

TERMOB NO. 17-025

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

UNIT 06 RESISTANCE WELDING

TERMOB NO. 17-026

1.00 CONDITION

( ) 1.01 BLUEPRINT OF SEAM OR JOINT TO BE SPOT WELDED
( ) 1.02 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.03 SPOT WELDING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 SPOT WELD A SEAM OR JOINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 CLAMP SEAM OR JOINT IN POSITION
( ) 2.03 SET HEAT
( ) 2.04 SPOT WELD DESIRED LOCATIONS

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 SEAM OR JOINT SPOT WELDED WITH NO BUCKLING OF MATERIAL TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE-HALF HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 PROPERLY ALIGNED
( ) 3.03 TO PROPER PENETRATION
( ) 3.04 IN CORRECT ORDER

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 02 WELDING & CUTTING

USOE CODE NO(S) _____

UNIT 06 RESISTANCE WELDING

TERMOB NO. 17-026

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 01 ANNEAL

TERMOB NO. 17-027

1.00 CONDITION

( ) 1.01 BLUEPRINT OF ANGLE PLATE
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 ANGLE PLATE (TOOL STEEL)
( ) 1.04 HEAT TREATMENT TABLES
( ) 1.05 FURNACE OR TORCH
( ) 1.06 ELECTRICAL HEAT SOURCE

2.00 PERFORMANCE

GENEPAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 ANNEAL ANGLE PLATE TO THE FOLLOWING PROCEDURE:

( ) 2.02 HEAT ANGLE PLATE
( ) 2.03 LEAVE ANGLE PLATE TO COOL

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 COLD ROLLED STEEL ANGLE PLATE BROUGHT BACK TO ITS ORIGINAL STATE TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 SLIGHTLY ABOVE CRITICAL RANGE, HEATED UNIFORMLY
( ) 3.03 ANGLE PLATE COOLED SLOWLY TO ROOM TEMPERATURE IN TURNED OFF FURNACE

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

USOE CODE NO(S) _____

UNIT 01 ANNEAL

TERMOB NO. 17-027

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 01 ANNEAL

TERMOB NO. 17-028

1.00 CONDITION

( ) 1.01 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.02 HEAT TREATMENT TABLES
( ) 1.03 FURNACE
( ) 1.04 WELDED PIECE, ABOUT 5 POUNDS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 NORMALIZE WELDED PIECE EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 HEAT PIECE
( ) 2.03 SET PIECE OUT TO COOL

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WELDED PIECE IS NORMALIZED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN ONE HOUR WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO 100°F ABOVE UPPER CRITICAL TEMPERATURE
( ) 3.03 PIECE LEFT TO COOL TO ROOM TEMPERATURE IN AIR

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

USOE CODE NO(S) _____

UNIT 01 ANNEAL

TERMOB NO. 17-028

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 02 DEEP HARDENING

TERMOB NO. 17-029

1.00 CONDITION

( ) 1.01 BLUEPRINT OF CENTER PUNCH
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 CENTER PUNCH
( ) 1.04 FURNACE
( ) 1.05 QUENCHING MEDIUM
( ) 1.06 HEAT TREATMENT TABLES

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 HARDEN CENTER PUNCH BY THE FOLLOWING PROCEDURE:

( ) 2.02 HEAT CENTER PUNCH IN FURNACE
( ) 2.03 QUENCH HEATED CENTER PUNCH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CENTER PUNCH IS HARDENED TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN TWO HOURS WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO CRITICAL TEMPERATURE
( ) 3.03 QUENCHED IN MEDIUM AS SPECIFIED IN HEAT TREATMENT TABLES

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

USOE CODE NO(S) _____

UNIT 02 DEEP HARDENING

TERMOB NO. 17-029

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 03 CASE HARDENING

TERMOB NO. 17-030

1.00 CONDITION

( ) 1.01 TABLE OF SPECIFICATIONS FOR CARBURIZING
( ) 1.02 FURNACE
( ) 1.03 QUENCHING MEDIUM
( ) 1.04 LOW CARBON STEEL
( ) 1.05 CARBURIZING MATERIAL
( ) 1.06 SEALED BOX
( ) 1.07 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 CASE HARDEN LOW CARBON TOOL BIT BY THE CARBURIZING METHOD TO THE FOLLOWING PROCEDURE:

( ) 2.02 PACK TOOL BIT IN BOX
( ) 2.03 SURROUND THE TOOL BIT WITH CARBURIZING MATERIAL
( ) 2.04 SEAL OFF BOX WITH FIRE CLAY
( ) 2.05 HEAT IN FURNACE
( ) 2.06 SHUT OFF FURNACE AND ALLOW TO COOL
( ) 2.07 REMOVE PIECES FROM BOX AND REHEAT
( ) 2.08 QUENCH
( ) 2.09 REHEAT AND QUENCH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TOOL BIT HARDENED TO SPECIFICATIONS AND APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN SEVEN HOURS WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TIGHTLY
( ) 3.03 CARBURIZING MATERIAL ENTIRELY SURROUNDS TOOL BIT
( ) 3.04 AIR TIGHT
( ) 3.05 TO $\pm 5^{\circ}$ FOR SIX HOURS
( ) 3.06 FURNACE TURNED OFF AND WORK PIECES ALLOWED TO COOL
( ) 3.07 WORK PIECES REHEATED TO $1650^{\circ}F \pm 5^{\circ}$
( ) 3.08 QUENCHED
( ) 3.09 REHEATED TO $1450^{\circ}F \pm 5^{\circ}$ AND QUENCHED

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 03 HEAT TREATING

UNIT 03 CASE HARDENING

TERMOB NO. 17-030

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 04 TEMPERING

TERMOB NO. 17-031

1.00 CONDITION

( ) 1.01 BLUEPRINT OF HARDENED CENTER PUNCH
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 HEAT TREATMENT TABLES
( ) 1.04 FURNACE
( ) 1.05 QUENCHING MEDIUM
( ) 1.06 COLOR CHARTS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 TEMPER HARDENED CENTER PUNCH TO THE FOLLOWING PROCEDURE:

( ) 2.02 HEAT CENTER PUNCH
( ) 2.03 QUENCH CENTER PUNCH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CENTER PUNCH DOES NOT SHATTER UNDER USE AND POINT RETAINING ITS SHARPNESS MEETING APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THIRTY-FIVE MINUTES WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 HEATED TO CORRECT TEMPERATURE BELOW CRITICAL RANGE
( ) 3.03 IN CORRECT QUENCH MEDIUM AS SPECIFIED IN HEAT TREATMENT TABLES

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 03 HEAT TREATING

UNIT 04 TEMPERING

TERMOB NO. 17-031

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

UNIT 05 HARDNESS TESTING

TERMOB NO. 17-032

1.00 CONDITION

( ) 1.01 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.02 HARDNESS TABLES
( ) 1.03 ROCKWELL HARDNESS TESTER
( ) 1.04 HEAT TREATED PIECE OF STEEL WITH KNOWN HARDNESS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 PERFORM PENETRATION TEST ON HEAT TREATED PIECE OF STEEL TO THE FOLLOWING PROCEDURE:

( ) 2.02 PLACE HEAT TREATED PIECE OF STEEL IN ROCKWELL HARDNESS TESTER
( ) 2.03 APPLY MINOR LOAD AND SET ZERO POINT
( ) 2.04 APPLY MAJOR LOAD
( ) 2.05 RELEASE MAJOR LOAD
( ) 2.06 READ HARDNESS ON ROCKWELL SCALE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 HARDNESS OF HEAT TREATED PIECE OF STEEL IS CALCULATED TO WITHIN TWO POINTS ON THE ROCKWELL SCALE. TO BE COMPLETED WITHIN FIFTEEN MINUTES WITH EACH STEP OF THE PROCEDURE JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 PIECE OF STEEL FIRMLY PLACED IN TESTER
( ) 3.03 ZERO POINT SET AT MINOR LOAD
( ) 3.04 MAJOR LOAD APPLIED
( ) 3.05 MAJOR LOAD RELEASED WHEN DIAL STOPS
( ) 3.06 TO WITHIN ONE POINT ON ROCKWELL SCALE

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 03 HEAT TREATING

USOE CODE NO(S) _____

UNIT 05 HARDNESS TESTING

TERMOB NO. 17-032

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-033

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF BOX WITH SLIDING TOP
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 PAN BRAKE
( ) 1.04 BENCH STAKES
( ) 1.05 POWER SHEARS
( ) 1.06 26-GAUGE GALVANIZED IRON
( ) 1.07 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.08 WELDING HAND TOOLS (TABLE T-3B)
( ) 1.09 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A BOX WITH A SLIDING TOP AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 SPOT WELD LAPS
( ) 2.06 ASSEMBLE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 BOX WITH SLIDING TOP IS FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO +1/32
( ) 3.03 TO ∓1/32
( ) 3.04 TO ∓1/32
( ) 3.05 WITHOUT BUCKLING MATERIAL
( ) 3.06 SLIDING TOP OPERATES PROPERLY

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 04 SHEETMETAL FABRICATION

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-033

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-034

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF TOOL TRAY
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 20-GAUGE GALVANIZED IRON
( ) 1.04 POWER SHEAR
( ) 1.05 CORNICE BRAKE
( ) 1.06 BAR FOLDER
( ) 1.07 NOTCHER
( ) 1.08 ROLL FORMING MACHINE
( ) 1.09 PAN BRAKE
( ) 1.10 SOLDERING EQUIPMENT (TABLE T-3D)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A TOOL TRAY AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 SPOT WELD LAPS
( ) 2.06 ASSEMBLE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TOOL TRAY IS FABRICATED TO WITHIN DRAWING TOLERANCES WITH APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 WITHOUT BUCKLING MATERIAL
( ) 3.06 HANDLE ALIGNED, SOLDERED SEAMS SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 04 SHEETMETAL FABRICATION

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-034

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____ 124

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-035

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF TOOL BOX WITH HINGED COVER, HASP, AND HANDLES
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 18-GAUGE GALVANIZED IRON
( ) 1.04 POWER SHEAR
( ) 1.05 CORNICE BRAKE
( ) 1.06 BAR FOLDER
( ) 1.07 PAN BRAKE
( ) 1.08 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.09 SPOT WELDING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A TOOL BOX AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 BEND
( ) 2.06 GAS WELD CORNERS OF BOX AND COVER
( ) 2.07 SPOT WELD HINGES TO COVER AND BOX
( ) 2.08 SPOT WELD HASP AND HANDLES
( ) 2.09 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TOOL BOX IS FABRICATED TO WITHIN DRAWING TOLERANCES AND ALL MOVING PARTS ARE OPERATING PROPERLY TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$1/32
( ) 3.03 TO $\pm$1/32
( ) 3.04 TO $\pm$1/32
( ) 3.05 TO $\pm$1/32
( ) 3.06 WELD SMOOTH WITH PROPER PENETRATION
( ) 3.07 PROPERLY ALIGNED AND WITHOUT BUCKLING MATERIAL
( ) 3.08 PROPERLY ALIGNED AND WITHOUT BUCKLING MATERIAL
( ) 3.09 ALL WELDS AND SHARP EDGES SMOOTH

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF TOOL BOX WITH HINGED COVER, HASP, AND HANDLES
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 18-GAUGE GALVANIZED IRON
( ) 1.04 POWER SHEAR
( ) 1.05 CORNICE BRAKE
( ) 1.06 BAR FOLDER
( ) 1.07 PAN BRAKE
( ) 1.08 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.09 SPOT WELDING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A TOOL BOX AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 BEND
( ) 2.06 GAS WELD CORNERS OF BOX AND COVER
( ) 2.07 SPOT WELD HINGES TO COVER AND BOX
( ) 2.08 SPOT WELD HASP AND HANDLES
( ) 2.09 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TOOL BOX IS FABRICATED TO WITHIN DRAWING TOLERANCES AND ALL MOVING PARTS ARE OPERATING PROPERLY TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 WELD SMOOTH WITH PROPER PENETRATION
( ) 3.07 PROPERLY ALIGNED AND WITHOUT BUCKLING MATERIAL
( ) 3.08 PROPERLY ALIGNED AND WITHOUT BUCKLING MATERIAL
( ) 3.09 ALL WELDS AND SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 01 INDUSTRIAL EQUIPMENT

TERMOB NO. 17-035

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-036

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF FUNNEL WITH WIRE EDGE SEAM AND GROOVE
( ) 1.02 THICK EDGE MACHINE
( ) 1.03 MANUAL FORMING ROLLS
( ) 1.04 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.05 BENCH STAKES
( ) 1.06 SOLDERING EQUIPMENT (TABLE T-3D)
( ) 1.07 STOCK

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A FUNNEL AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT OUT AND NOTCH
( ) 2.04 TURN AND FORM HEM AND EDGE
( ) 2.05 ROLL AND FORM FUNNEL AND SPOUT
( ) 2.06 HOOK EDGES AND FINISH GROOVE SEAM
( ) 2.07 TURN EDGE FOR WIRING
( ) 2.08 WIRE EDGE
( ) 2.09 SOLDER SPOUT LAP
( ) 2.10 TACK SOLDER SPOUT
( ) 2.11 SOLDER GROOVE SEAM
( ) 2.12 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 FUNNEL IS FABRICATED TO WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO ±1/32
( ) 3.03 TO ∓1/32
( ) 3.04 SMOOTH AND TIGHT
( ) 3.05 EDGES STRAIGHT WITH NO BOX
( ) 3.06 TO +1/32
( ) 3.07 SMOOTH
( ) 3.08 EDGE WIRED

( ) 1.02 THICK EDGE TACKING
( ) 1.03 MANUAL FORMING ROLLS
( ) 1.04 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.05 BENCH STAKES
( ) 1.06 SOLDERING EQUIPMENT (TABLE T-3D)
( ) 1.07 STOCK

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A FUNNEL AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT OUT AND NOTCH
( ) 2.04 TURN AND FORM HEM AND EDGE
( ) 2.05 ROLL AND FORM FUNNEL AND SPOUT
( ) 2.06 HOOK EDGES AND FINISH GROOVE SEAM
( ) 2.07 TURN EDGE FOR WIRING
( ) 2.08 WIRE EDGE
( ) 2.09 SOLDER SPOUT LAP
( ) 2.10 TACK SOLDER SPOUT
( ) 2.11 SOLDER GROOVE SEAM
( ) 2.12 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 FUNNEL IS FABRICATED TO WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 SMOOTH AND TIGHT
( ) 3.05 EDGES STRAIGHT WITH NO BOX
( ) 3.06 TO $\pm 1/32$
( ) 3.07 SMOOTH
( ) 3.08 EDGE WIRED
( ) 3.09 SMOOTH WITH NO EXCESS
( ) 3.10 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.11 SMOOTH WITH NO EXCESS
( ) 3.12 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-036

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-037

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF SQUARE TAPERED WASTEBASKET WITH SPLIT TUBING EDGING
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 CORNICE BRAKE
( ) 1.04 POWER SHEAR
( ) 1.05 SOLDERING EQUIPMENT
( ) 1.06 26-GAUGE GALVANIZED IRON
( ) 1.07 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.08 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A SQUARE, TAPERED WASTEBASKET WITH SPLIT TUBING EDGING AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT BENDS, NOTCHES, ETC.
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 BEND
( ) 2.06 TACK, SOLDER BODY TO BOTTOM
( ) 2.07 SOLDER BODY TO BOTTOM
( ) 2.08 TACK WELD CORNERS OF PIPE
( ) 2.09 WELD CORNERS OF PIPE
( ) 2.10 TACK, SOLDER SPLIT PIPE TO BODY
( ) 2.11 SOLDER PIPE TO BODY

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WASTEBASKET FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN SIX HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO ±1/32
( ) 3.03 TO ±1/32
( ) 3.04 TO ±1/32
( ) 3.05 TO ±1/32
( ) 3.06 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.07 SMOOTH WITH NO EXCESS

( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3A)
( ) 1.03 CORNICE BRAKE
( ) 1.04 POWER SHEAR
( ) 1.05 SOLDERING EQUIPMENT
( ) 1.06 26-GAUGE GALVANIZED IRON
( ) 1.07 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.08 WELDING HAND TOOLS (TABLE T-3B)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A SQUARE, TAPERED WASTEBASKET WITH SPLIT TUBING EDGING AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT BENDS, NOTCHES, ETC.
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 BEND
( ) 2.06 TACK, SOLDER BODY TO BOTTOM
( ) 2.07 SOLDER BODY TO BOTTOM
( ) 2.08 TACK WELD CORNERS OF PIPE
( ) 2.09 WELD CORNERS OF PIPE
( ) 2.10 TACK, SOLDER SPLIT PIPE TO BODY
( ) 2.11 SOLDER PIPE TO BODY

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WASTEBASKET FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN SIX HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.07 SMOOTH WITH NO EXCESS
( ) 3.08 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.09 WELD SMOOTH WITH PROPER PENETRATION
( ) 3.10 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.11 SMOOTH WITH NO EXCESS

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-037

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-038

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF RECTANGULAR TRASHBAG HOLDER FOR INSIDE A CABINET DOOR
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 BRAKES
( ) 1.04 POWER SHEAR
( ) 1.05 HAND PUNCH
( ) 1.06 26-GAUGE GALVANIZED IRON
( ) 1.07 SOLDERING EQUIPMENT (TABLE T-3D)

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A TRASHBAG HOLDER AS SPECIFIED IN DRAWING TO THE FOLLOWING PROCEDURE:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS, NOTCHES, ETC.
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 BEND
( ) 2.06 TACK, SOLDER BOTTOM TO BODY
( ) 2.07 SOLDER BOTTOM TO BODY

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TRASHBAG HOLDER FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 IN CORRECT PLACES TO COUNTERACT EXPANSION DUE TO HEAT
( ) 3.07 SMOOTH WITH NO EXCESS

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-038

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-039

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF CURVED, WALL MOUNTING, GARDEN HOSE BRACKET
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 SLIP ROLLS
( ) 1.04 THICK EDGE ROTARY MACHINE
( ) 1.05 HAND CORNICE BRAKE
( ) 1.06 DRILL PRESS
( ) 1.07 18-GAUGE GALVANIZED IRON
( ) 1.08 3/16 x 3/4 HOT ROLL FLAT BAR
( ) 1.09 ASSORTED BOLTS & NUTS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A GARDEN HOSE BRACKET AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING PROCEDURE:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS, BEADS, AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 TURN BEADS
( ) 2.06 BEND FLANGE
( ) 2.07 LAYOUT FLAT BAR FOR HOLES AND BENDS
( ) 2.08 DRILL
( ) 2.09 BEND
( ) 2.10 ASSEMBLE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 GARDEN HOSE BRACKET FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$1/32
( ) 3.03 TO $\pm$1/32
( ) 3.04 TO $\pm$1/32
( ) 3.05 TO $\pm$1/32
( ) 3.06 TO $\pm$1/32
( ) 3.07 TO $\pm$1/32
( ) 3.08 TO $\pm$1/32

( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 SLIP ROLLS
( ) 1.04 THICK EDGE ROTARY MACHINE
( ) 1.05 HAND CORNICE BRAKE
( ) 1.06 DRILL PRESS
( ) 1.07 18-GAUGE GALVANIZED IRON
( ) 1.08 3/16 x 3/4 HOT ROLL FLAT BAR
( ) 1.09 ASSORTED BOLTS & NUTS

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A GARDEN HOSE BRACKET AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING PROCEDURE:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS, BEADS, AND NOTCHES
( ) 2.04 CUT OUT AND NOTCH
( ) 2.05 TURN BEADS
( ) 2.06 BEND FLANGE
( ) 2.07 LAYOUT FLAT BAR FOR HOLES AND BENDS
( ) 2.08 DRILL
( ) 2.09 BEND
( ) 2.10 ASSEMBLE

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 GARDEN HOSE BRACKET FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO ±1/32
( ) 3.03 TO ±1/32
( ) 3.04 TO ±1/32
( ) 3.05 TO ±1/32
( ) 3.06 TO ±1/32
( ) 3.07 TO ±1/32
( ) 3.08 TO ±1/32
( ) 3.09 TO ±1/32
( ) 3.10 FLAT BAR PROPERLY AND FIRMLY ALIGNED TO BODY

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-039

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-040

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF WROUGHT IRON STEP STOOL WITH FLOOR TO FRAME TRIRADIATE LEGS
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 GAS WELDING EQUIPMENT (TABLE T-3C)
( ) 1.04 ANGLE IRON
( ) 1.05 HOT ROLL ROD
( ) 1.06 PERFORATED STEEL
( ) 1.07 SPOT WELDING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A WROUGHT IRON STEP STOOL AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 WELD ANGLE IRON
( ) 2.05 SPOT WELD PERFORATED STEEL TO ANGLE IRON FRAME
( ) 2.06 WELD LEGS TO FRAME
( ) 2.07 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 WROUGHT IRON STEP STOOL FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FOUR HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 WELD SMOOTH WITH PROPER PENETRATION
( ) 3.05 PROPERLY ALIGNED WITHOUT BUCKLING MATERIAL
( ) 3.06 WELD SMOOTH WITH PROPER PENETRATION
( ) 3.07 ALL WELDS AND SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-040

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-041

1.00 CONDITION

( ) 1.01 DIMENSIONED ISOMETRIC DRAWING OF WALL TYPE TAPERING RECTANGULAR MAIL BOX
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 SHEAR
( ) 1.04 SLIP ROLL
( ) 1.05 CORNICE BRAKE
( ) 1.06 DRILL PRESS
( ) 1.07 SPOT WELDING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A MAIL BOX AS SPECIFIED IN DRAWING EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 LAY OUT FOR BENDS, HOLES, NOTCHES
( ) 2.04 CUT AND NOTCH
( ) 2.05 DRILL
( ) 2.06 BEND
( ) 2.07 FORM
( ) 2.08 SPOT WELD SEAMS
( ) 2.09 INSTALL PIVOT HINGES
( ) 2.10 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 MAIL BOX IS FABRICATED WITHIN DRAWING TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN THREE AND ONE-HALF HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 TO $\pm 1/32$
( ) 3.06 TO $\pm 1/32$
( ) 3.07 EDGES STRAIGHT WITH NO BOW
( ) 3.08 WITHOUT BUCKLING MATERIAL
( ) 3.09 ALIGNED AND OPERATING PROPERLY
( ) 3.10 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 02 HOUSEHOLD EQUIPMENT

TERMOB NO. 17-041

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 03 PRECISION SHEETMETAL

TERMOB NO. 17-042

1.00 CONDITION

( ) 1.01 BLUEPRINT OF CHASSIS COVER WITH A SERIES OF SQUARE AND ROUND HOLES
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 DRILL PRESS
( ) 1.04 16-GAUGE STAINLESS STEEL
( ) 1.05 POWER SHEAR
( ) 1.06 PUNCH PRESS
( ) 1.07 DIAL CALIPER

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE CHASSIS COVER AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 MACHINE ALL HOLES

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CHASSIS COVER IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$.005
( ) 3.03 TO $\mp$.005
( ) 3.04 TO $\pm$.005

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 04 SHEETMETAL FABRICATION

UNIT 03 PRECISION SHEETMETAL

TERMOB NO. 17-042

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 03 PRECISION SHEETMETAL

TERMOB NO. 17-043

1.00 CONDITION

( ) 1.01 BLUEPRINT OF HAT SECTION CHANNEL WITH A SERIES OF ROUND HOLES AND A SLOT
( ) 1.02 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.03 DRILL PRESS
( ) 1.04 16-GAUGE STAINLESS STEEL
( ) 1.05 BRAKES
( ) 1.06 POWER SHEAR
( ) 1.07 FORMING MACHINES

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE HAT SECTION CHANNEL AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE BEND ALLOWANCES
( ) 2.03 COMPUTE CUTTING SIZE
( ) 2.04 CUT
( ) 2.05 PUNCH HOLES
( ) 2.06 DRILL HOLES
( ) 2.07 BEND

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 HAT SECTION CHANNEL IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$.001
( ) 3.03 TO $\pm$.001
( ) 3.04 TO $\pm$.005
( ) 3.05 TO $\pm$.001
( ) 3.06 TO $\pm$.005
( ) 3.07 TO $\pm 1/4^{\circ}$

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 03 PRECISION SHEETMETAL

TERMOB NO. 17-043

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-044

1.00 CONDITION

( ) 1.01 PATTERN OF CURVED OFFSET DUCT HAVING RECTANGULAR PROFILE
( ) 1.02 BLUEPRINT OF CURVED OFFSET DUCT HAVING RECTANGULAR PROFILE
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 ROLL FORMING MACHINE
( ) 1.06 POWER SHEAR
( ) 1.07 BURRING MACHINE
( ) 1.08 BENCH STAKES
( ) 1.09 TURNING MACHINE
( ) 1.10 GROOVER
( ) 1.11 22-GAUGE GALVANIZED IRON
( ) 1.12 LOCK FORMING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A CURVED OFFSET DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 CURVE
( ) 2.07 ASSEMBLE
( ) 2.08 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CURVED OFFSET DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 EDGES STRAIGHT WITH NO BOW

( ) 1.02 BLUEPRINT OF CURVED OFFSET DUCT HAVING RECTANGULAR PROFILE
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 ROLL FORMING MACHINE
( ) 1.06 POWER SHEAR
( ) 1.07 BURRING MACHINE
( ) 1.08 BENCH STAKES
( ) 1.09 TURNING MACHINE
( ) 1.10 GROOVER
( ) 1.11 22-GAUGE GALVANIZED IRON
( ) 1.12 LOCK FORMING MACHINE

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A CURVED OFFSET DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 CURVE
( ) 2.07 ASSEMBLE
( ) 2.08 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 CURVED OFFSET DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm$1/32
( ) 3.03 TO $\pm$1/32
( ) 3.04 TO $\pm$1/32
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 EDGES STRAIGHT WITH NO BOW
( ) 3.07 TO $\pm$1/32
( ) 3.08 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-044

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-045

1.00 CONDITION

( ) 1.01 PATTERN OF DUCT WITH SQUARE TO SQUARE TAPER
( ) 1.02 BLUEPRINT OF DUCT WITH SQUARE TO SQUARE TAPER
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 POWER SHEAR
( ) 1.06 BURRING MACHINE
( ) 1.07 BENCH STAKES
( ) 1.08 BAR FOLDER
( ) 1.09 TURNING MACHINE
( ) 1.10 CRIMPING MACHINE
( ) 1.11 GROOVER
( ) 1.12 ELBOW EDGING MACHINE
( ) 1.13 22-GAUGE GALVANIZED IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A SQUARE TO SQUARE TAPERED DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 ASSEMBLE
( ) 2.07 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 SQUARE TO SQUARE TAPERED DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 TO $\pm 1/32$
( ) 3.07 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-045

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-046

1.00 CONDITION

( ) 1.01 PATTERN OF ONE-PIECE DUCT
( ) 1.02 BLUEPRINT OF ONE-PIECE DUCT
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 POWER SHEAR
( ) 1.06 BENCH STAKES
( ) 1.07 BAR FOLDER
( ) 1.08 GROOVER
( ) 1.09 22-GAUGE GALVANIZED IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A ONE-PIECE DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 ASSEMBLE
( ) 2.07 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 ONE-PIECE DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 TO $\pm 1/32$
( ) 3.07 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-046

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-047

1.00 CONDITION

( ) 1.01 PATTERN OF TWISTED, QUARTER TURN RECTANGULAR DUCT
( ) 1.02 BLUEPRINT OF TWISTED, QUARTER TURN RECTANGULAR DUCT
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 POWER SHEAR
( ) 1.06 BENCH STAKES
( ) 1.07 BAR FOLDER
( ) 1.08 GROOVER
( ) 1.09 22-GAUGE GALVANIZED IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A TWISTED, QUARTER TURN RECTANGULAR DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 ASSEMBLE
( ) 2.07 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 TWISTED, QUARTER TURN RECTANGULAR DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\mp 1/32$
( ) 3.04 TO $\mp 1/32$
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 TO $\pm 1/32$
( ) 3.07 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

USOE CODE NO(S) _____

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-047

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

MISOE NO. _____

PROGRAM METALWORKING

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-048

1.00 CONDITION

( ) 1.01 PATTERN OF RECTANGULAR, DOUBLE OFFSET DUCT
( ) 1.02 BLUEPRINT OF RECTANGULAR, DOUBLE OFFSET DUCT
( ) 1.03 BASIC METALWORKER'S HAND TOOLS (TABLE T-3)
( ) 1.04 BRAKES
( ) 1.05 ROLL FORMING MACHINE
( ) 1.06 POWER SHEAR
( ) 1.07 BURRING MACHINE
( ) 1.08 BENCH STAKES
( ) 1.09 BAR FOLDER
( ) 1.10 GROOVER
( ) 1.11 22-GAUGE GALVANIZED IRON

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME
( ) 2.01 FABRICATE A RECTANGULAR, DOUBLE OFFSET DUCT AS SPECIFIED IN BLUEPRINT EMPLOYING THE FOLLOWING OPERATIONS:

( ) 2.02 COMPUTE CUTTING SIZE
( ) 2.03 CUT
( ) 2.04 BEND
( ) 2.05 SHAPE
( ) 2.06 CURVE
( ) 2.07 ASSEMBLE
( ) 2.08 FINISH

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME
( ) 3.01 RECTANGULAR, DOUBLE OFFSET DUCT IS FABRICATED WITHIN BLUEPRINT TOLERANCES TO APPROVAL OF BOARD OF EXPERT RATERS. TO BE COMPLETED WITHIN FIVE HOURS WITH EACH OPERATION JUDGED AS SATISFACTORY OR UNSATISFACTORY

( ) 3.02 TO $\pm 1/32$
( ) 3.03 TO $\pm 1/32$
( ) 3.04 TO $\pm 1/32$
( ) 3.05 EDGES STRAIGHT WITH NO BOW
( ) 3.06 EDGES STRAIGHT WITH NO BOW
( ) 3.07 TO $\pm 1/32$
( ) 3.08 ALL SHARP EDGES SMOOTH

MISOE NO. _____

PROGRAM METALWORKING

USOE CODE NO(S) _____

DIVISION 04 SHEETMETAL FABRICATION

UNIT 04 HEATING AND VENTILATION

TERMOB NO. 17-048

1.00 CONDITION

2.00 PERFORMANCE

GENERAL STATEMENT OF PERFORMANCE AND RESULTING OUTCOME

3.00 EXTENT

GENERAL STATEMENT OF EXTENT AND EXTENT OF RESULTING OUTCOME

TABLE T-3

BASIC METALWORKER'S HAND TOOLS

SCRATCH AWLS

DIVIDERS

STEEL SQUARES

TRAMMEL POINTS

STEEL RULES

PUNCHES

HAND GROOVES

RIVET SET

CHISELS

HAMMERS

SNIPS

PLIERS

HAND SEAMER (TONGS)

SOLDERING IRONS

HACKSAWS

FILES

PORTABLE DRILL

MEASURING TAPE

SAFETY GLASSES

SET OF DRILL BITS

TABLE T-3A

DRAFTING TOOLS

DRAWING BOARD

COMPASSES

DIVIDERS

PENCILS

EXTENSION BAR

RULING PEN

TEE SQUARE

TRIANGLES

RULE AND SCALES

DRAWING INK

TAPE

ERASERS

LETTERING PENS

CURVES (REGULAR AND IRREGULAR)

PROTRACTOR

DRAFTING MEDIA (PAPER)

FRENCH CURVE

TABLE T-3B

WELDING HAND TOOLS

WIRE BRUSH

CHIPPING HAMMER

HAMMER

WEDGES

CLAMPS

PLIERS

TONGS

GLOVES

SHIELD

APRON

SAFETY GLASSES

BENCH GRINDER

FLEXIBLE SHAFT GRINDER

TABLE T-3C

OXYGEN-ACETYLENE GAS WELDING EQUIPMENT

CYLINDER OF OXYGEN

CYLINDER OF ACETYLENE

CONNECTING HOSES

REGULATORS

APPARATUS WRENCH

WELDING TIPS

TORCH

SPARK LIGHTER

SAFETY GOGGLES

TIP CLEANER

TABLE T-3D

SOLDERING EQUIPMENT

SOLDERING IRON

SOLDER

FLUX

HEAT SOURCE

SALAMONIAC BLOCK

SAFETY GLASSES

Table T-4 Additional TERMOB Performance Statements

This form is provided for the addition of TERMOB performance statements to ensure more complete coverage of your program. Please provide a comprehensive performance statement (coded 2.01 on each TERMOB) for each area of deficiency that you have identified.

The performance statement need only be listed identified by the division and unit numbers of the deficient areas; the conditions and extents will be incorporated later.

1. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

2. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

3. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

4. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

5. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

6. Division_____ Performance Statement_____

   Unit_____ _____

   _____

   _____

Unit _____ _____

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2. Division _____ Performance Statement _____

Unit _____ _____

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3. Division _____ Performance Statement _____

Unit _____ _____

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4. Division _____ Performance Statement _____

Unit _____ _____

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5. Division _____ Performance Statement _____

Unit _____ _____

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6. Division _____ Performance Statement _____

Unit _____ _____

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_____

7. Division _____ Performance Statement _____

Unit _____ _____

_____

_____

Table T-4 (Cont'd) Additional TERMOB Performance Statements

This form is provided for the addition of TERMOB performance statements to ensure more complete coverage of your program. Please provide a comprehensive performance statement (coded 2.01 on each TERMOB) for each area of deficiency that you have identified.

The performance statement need only be listed identified by the division and unit numbers of the deficient areas; the conditions and extents will be incorporated later.

8. Division_____ Performance Statement_____

Unit_____ _____

_____

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9. Division_____ Performance Statement_____

Unit_____ _____

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10. Division_____ Performance Statement_____

Unit_____ _____

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11. Division_____ Performance Statement_____

Unit_____ _____

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12. Division_____ Performance Statement_____

Unit_____ _____

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13. Division_____ Performance Statement_____

Unit_____ _____

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Unit _____ _____

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9. Division _____ Performance Statement _____

Unit _____ _____

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10. Division _____ Performance Statement _____

Unit _____ _____

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11. Division _____ Performance Statement _____

Unit _____ _____

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12. Division _____ Performance Statement _____

Unit _____ _____

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_____

13. Division _____ Performance Statement _____

Unit _____ _____

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_____

14. Division _____ Performance Statement _____

Unit _____ _____

_____

_____

INDEX OF TERMOB STATEMENTS

PROGRAM: METALWORKING

TERMOB NO.		PAGE
17-001	LAY OUT PATTERNS FOR ROUND TEE BY PARALLEL LINE DEVELOPMENT METHOD	T-10
17-002	LAY OUT A PATTERN FOR A ROUND PIPE WITH MITER AT ONE END BY PARALLEL LINE DEVELOPMENT METHOD	T-12
17-003	LAY OUT A PATTERN FOR A STRAIGHT RECTANGULAR DUCT BY PARALLEL LINE DEVELOPMENT METHOD	T-14
17-004	LAY OUT A PATTERN FOR A RECTANGULAR DUCT WITH A DOUBLE ANGLE BY PARALLEL LINE DEVELOPMENT METHOD	T-16
17-005	LAY OUT PATTERNS FOR 3-PIECE ELBOW BY PARALLEL LINE DEVELOPMENT METHOD	T-18
17-006	LAY OUT A PATTERN FOR CENTERED ROUND TAPER BY THE RADIAL LINE DEVELOPMENT METHOD	T-20
17-007	LAY OUT A PATTERN FOR ROUND RIGHT CONE BY RADIAL LINE DEVELOPMENT METHOD	T-22
17-008	LAY OUT A PATTERN FOR A SQUARE TO ROUND FITTING BY THE TRIANGULATION METHOD	T-24
17-009	LAY OUT A ROUND TAPER THAT IS OFF CENTER BY THE TRIANGULATION METHOD	T-26
17-010	WELD A JOINT OR SEAM (ELECTRIC ARC)	T-28
17-011	REBUILD WORN AREA OF CAST IRON PIECE	T-30
17-012	HARD RESURFACE CAST IRON PIECE (RESIST ABRASION, ELECTRIC ARC)	T-32
17-013	HARD RESURFACE CAST IRON PIECE (RESIST CORROSION, ELECTRIC ARC)	T-34
17-014	WELD A SEAM OR JOINT (TIG)	T-36
17-015	HARD RESURFACE CAST IRON PIECE (RESIST ABRASION, TIG)	T-38
17-016	HARD RESURFACE CAST IRON PIECE (RESIST CORROSION, TIG)	T-40
17-017	WELD A SEAM OR JOINT (MIG)	T-42
17-018	WELD A JOINT OR SEAM (OXYGEN-ACETYLENE)	T-46
17-019	FLAME CUT STOCK	T-48
17-020	HARD RESURFACE CAST IRON PIECE	

DUCT BY PARALLEL LINE DEVELOPMENT METHOD T-14

17-004	LAY OUT A PATTERN FOR A RECTANGULAR DUCT WITH A DOUBLE ANGLE BY PARALLEL LINE DEVELOPMENT METHOD	T-16
17-005	LAY OUT PATTERNS FOR 3-PIECE ELBOW BY PARALLEL LINE DEVELOPMENT METHOD	T-18
17-006	LAY OUT A PATTERN FOR CENTERED ROUND TAPER BY THE RADIAL LINE DEVELOPMENT METHOD	T-20
17-007	LAY OUT A PATTERN FOR ROUND RIGHT CONE BY RADIAL LINE DEVELOPMENT METHOD	T-22
17-008	LAY OUT A PATTERN FOR A SQUARE TO ROUND FITTING BY THE TRIANGULATION METHOD	T-24
17-009	LAY OUT A ROUND TAPER THAT IS OFF CENTER BY THE TRIANGULATION METHOD	T-26
17-010	WELD A JOINT OR SEAM (ELECTRIC ARC)	T-28
17-011	REBUILD WORN AREA OF CAST IRON PIECE	T-30
17-012	HARD RESURFACE CAST IRON PIECE (RESIST ABRASION, ELECTRIC ARC)	T-32
17-013	HARD RESURFACE CAST IRON PIECE (RESIST CORROSION, ELECTRIC ARC)	T-34
17-014	WELD A SEAM OR JOINT (TIG)	T-36
17-015	HARD RESURFACE CAST IRON PIECE (RESIST ABRASION, TIG)	T-38
17-016	HARD RESURFACE CAST IRON PIECE (RESIST CORROSION, TIG)	T-40
17-017	WELD A SEAM OR JOINT (MIG)	T-42
17-018	WELD A JOINT OR SEAM (OXYGEN-ACETYLENE)	T-46
17-019	FLAME CUT STOCK	T-48
17-020	HARD RESURFACE CAST IRON PIECE (RESIST ABRASION, OXYGEN-ACETYLENE)	T-50
17-021	HARD RESURFACE CAST IRON PIECE (RESIST CORROSION, OXYGEN-ACETYLENE)	T-52
17-022	REBUILD WORN CAST IRON PEICE	T-54
17-023	REPAIR BROKEN CASTING	T-56
17-024	BRAZE SEAM	T-58
17-025	REPAIR FRACTURED CASTING	T-60

INDEX OR TERMOB STATEMENTS (CONT'D)

PROGRAM: METALWORKING

TERMOB NO.		PAGE
17-026	SPOT WELD A SEAM OR JOINT	T-62
17-027	ANNEAL ANGLE PLATE	T-64
17-028	NORMALIZE WELDED PIECE	T-66
17-029	HARDEN CENTER PUNCH	T-68
17-030	CASE HARDEN LOW CARBON TOOL BIT BY THE CARBURIZING METHOD	T-70
17-031	TEMPER HARDENED CENTER PUNCH	T-72
17-032	PERFORM PENETRATION TEST ON HEAT TREATED PIECE OF STEEL	T-74
17-033	FABRICATE A BOX WITH A SLIDING TOP	T-76
17-034	FABRICATE A TOOL TRAY	T-78
17-035	FABRICATE A TOOL BOX	T-80
17-036	FABRICATE A FUNNEL	T-82
17-037	FABRICATE A SQUARE, TAPERED WASTEBASKED WITH SPLIT TUBING EDGING	T-84
17-038	FABRICATE A TRASHBAG HOLDER	T-86
17-039	FABRICATE A GARDEN HOSE BRACKET	T-88
17-040	FABRICATE A WROUGHT IRON STEP STOOL	T-90
17-041	FABRICATE A MAIL BOX	T-92
17-042	FABRICATE CHASSIS COVER	T-94
17-043	FABRICATE HAT SECTION CHANNEL	T-96
17-044	FABRICATE A CURVED OFFSET DUCT	T-98
17-045	FABRICATE A SQUARE TO SQUARE TAPERED DUCT	T-100
17-046	FABRICATE A ONE-PIECE DUCT	T-102
17-047	FABRICATE A TWISTED, QUARTER TURN RECTANGULAR DUCT	T-104
17-048	FABRICATE A RECTANGULAR, DOUBLE OFFSET DUCT	T-106